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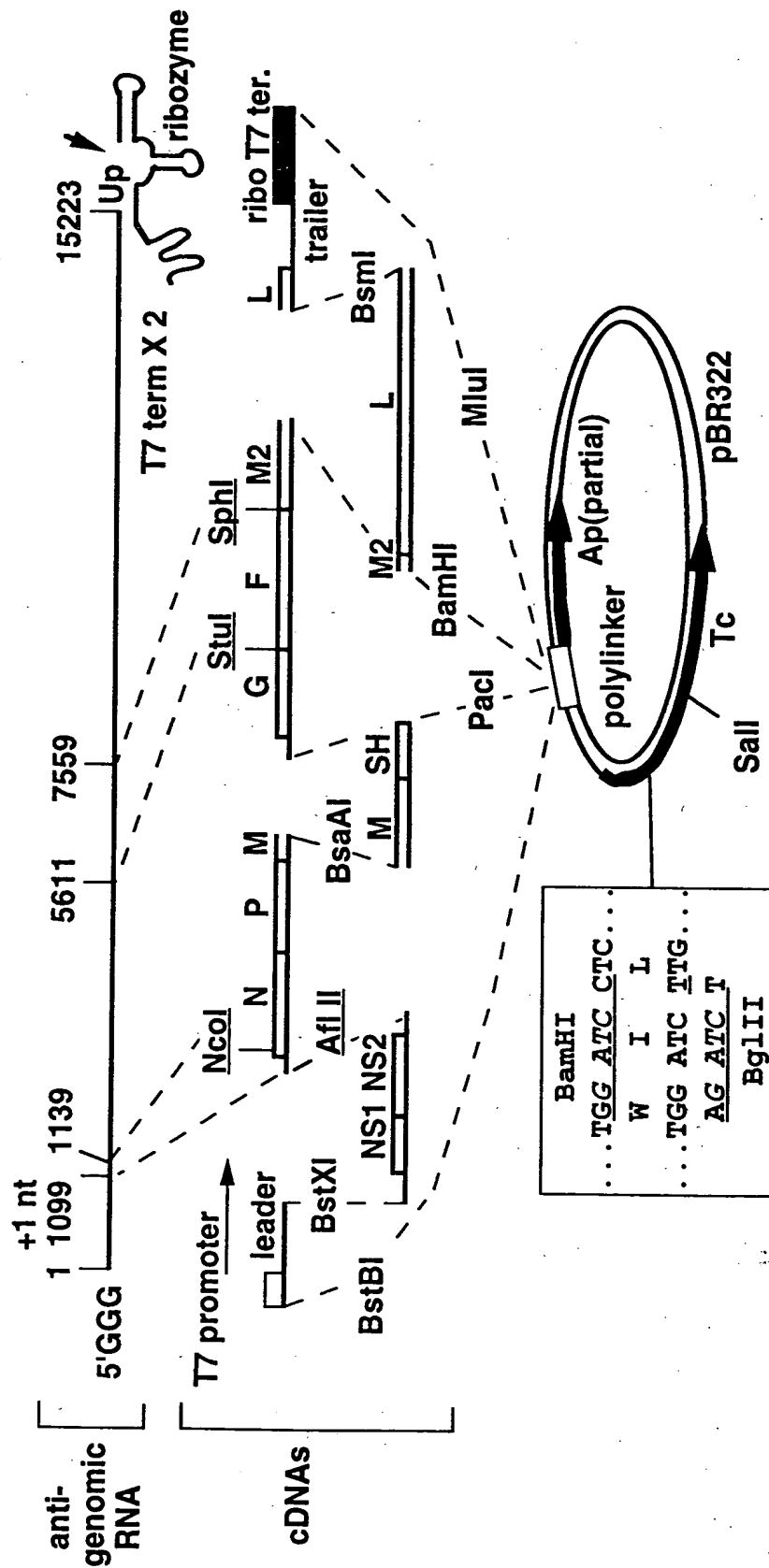
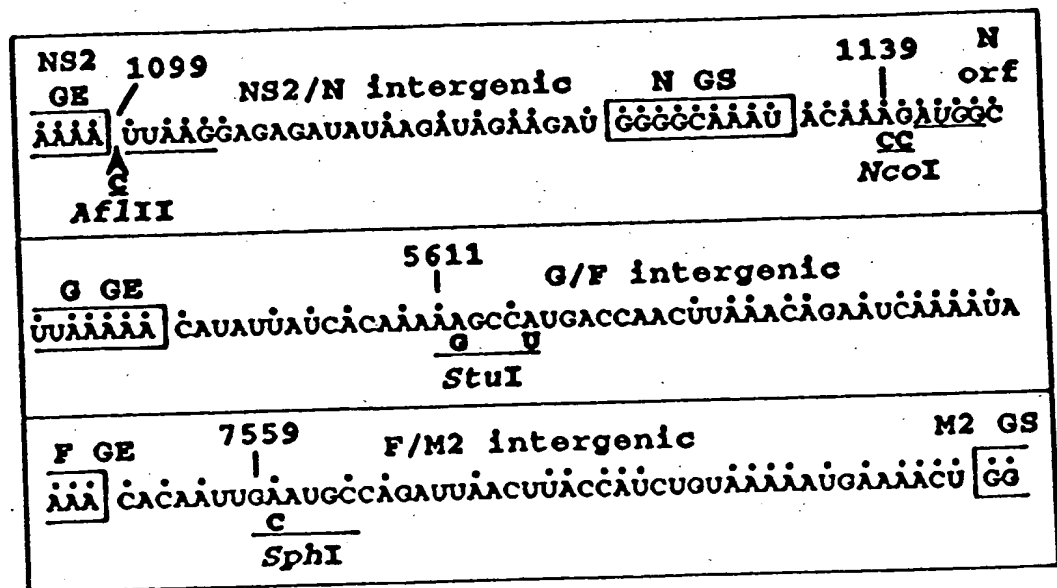


Fig. 2

FIG. 3



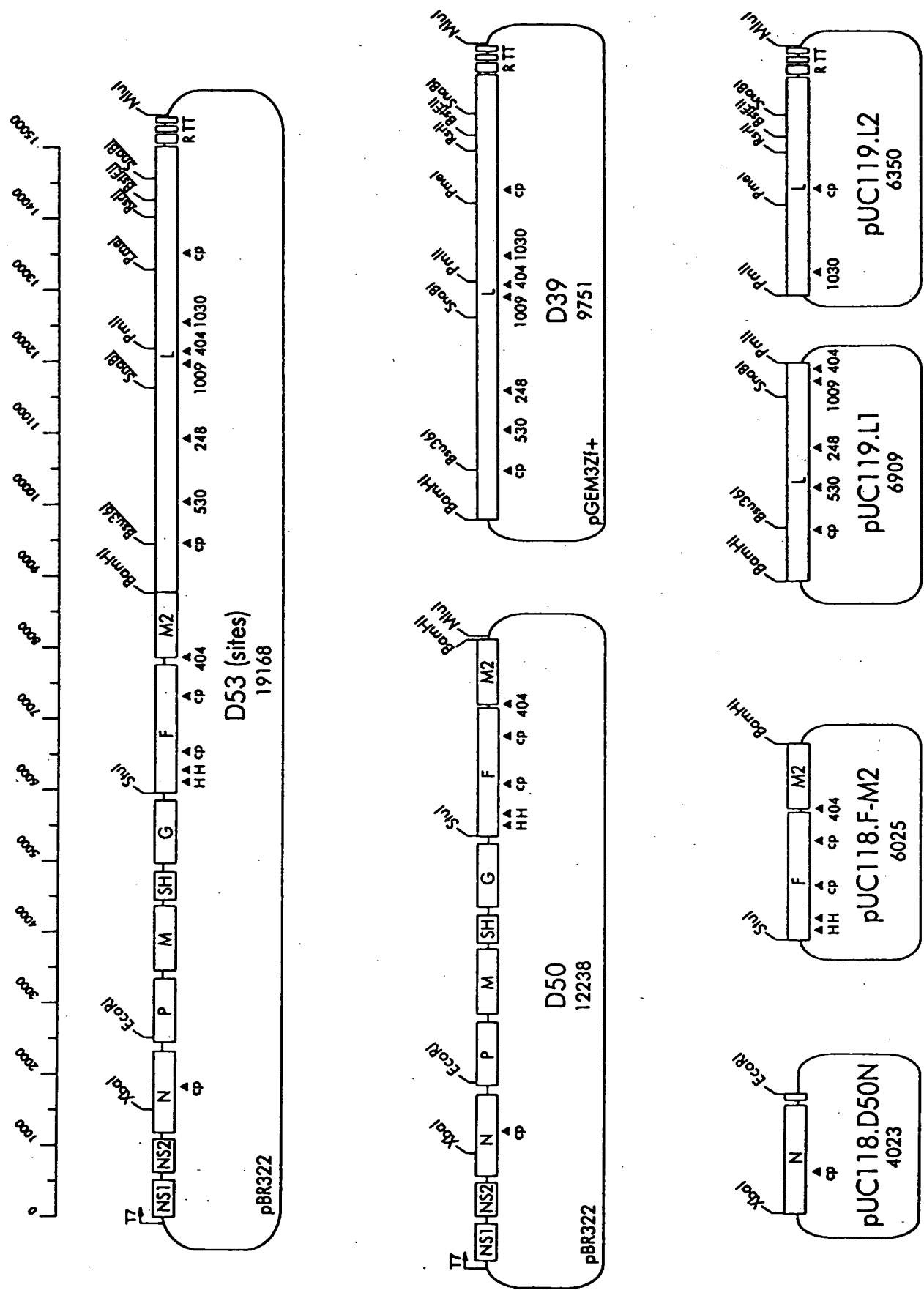


FIG. 4

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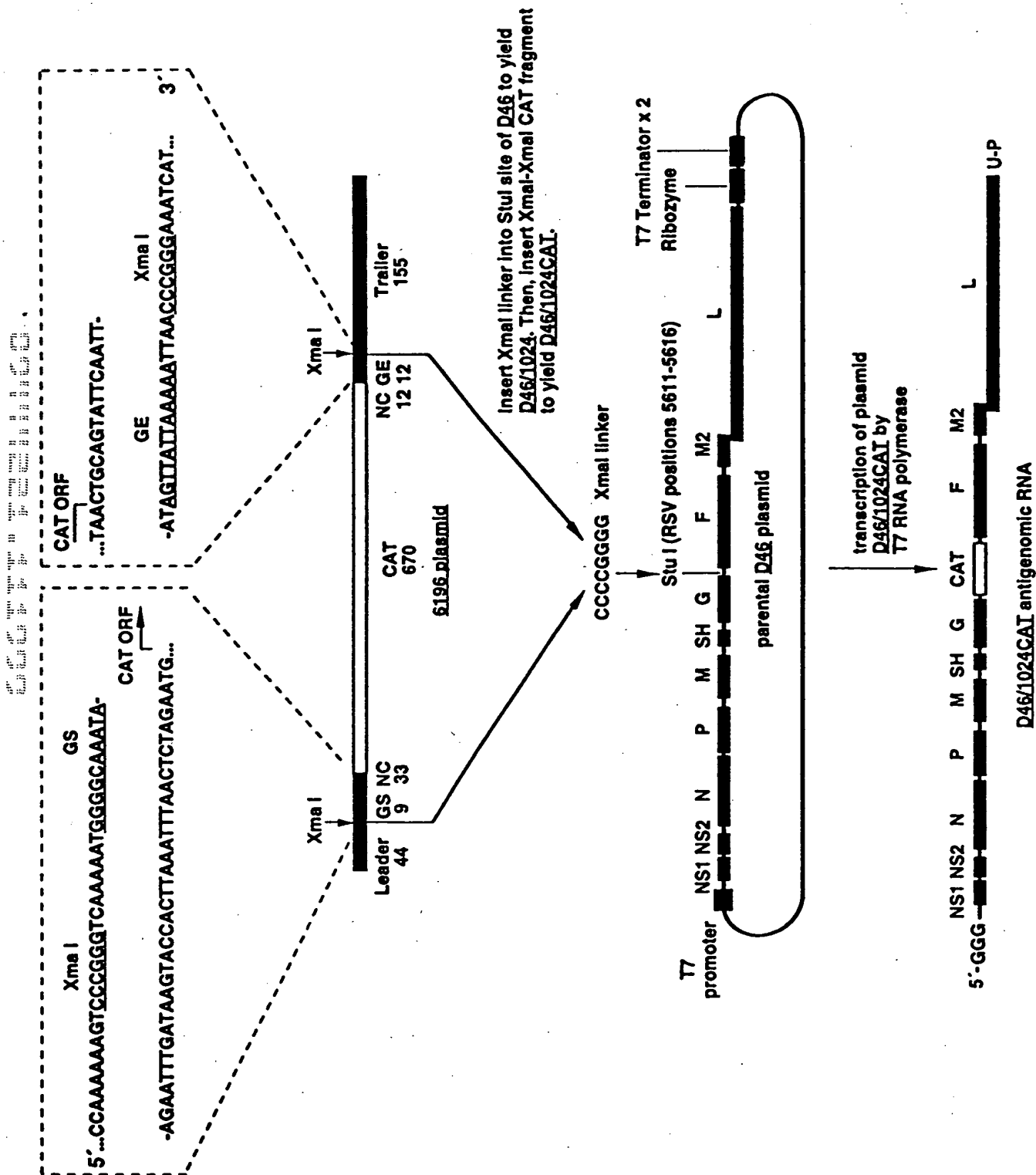
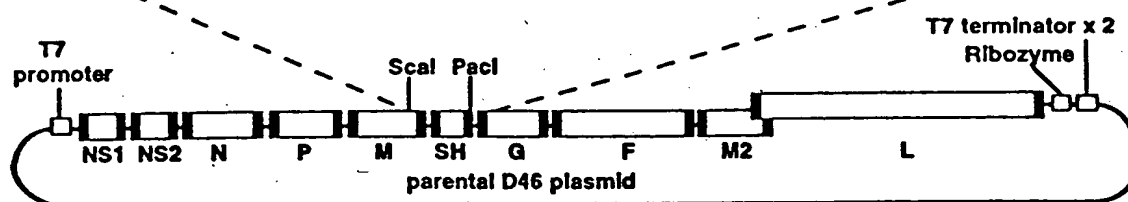
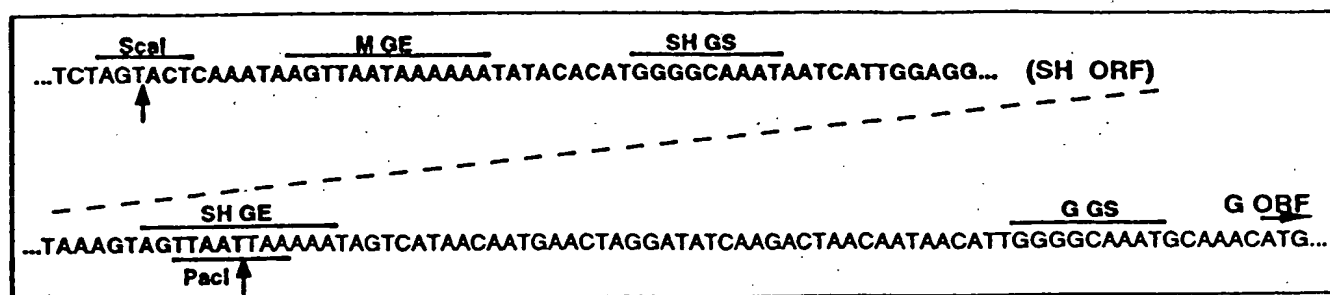
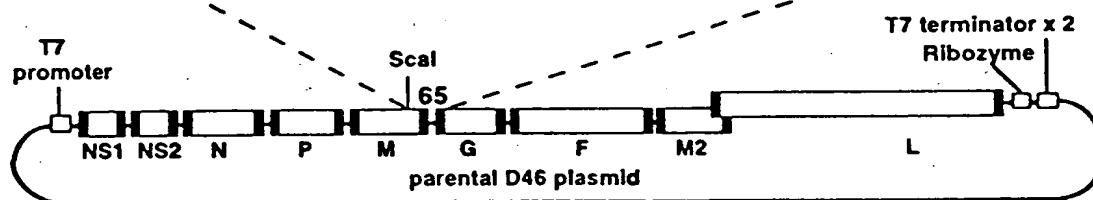
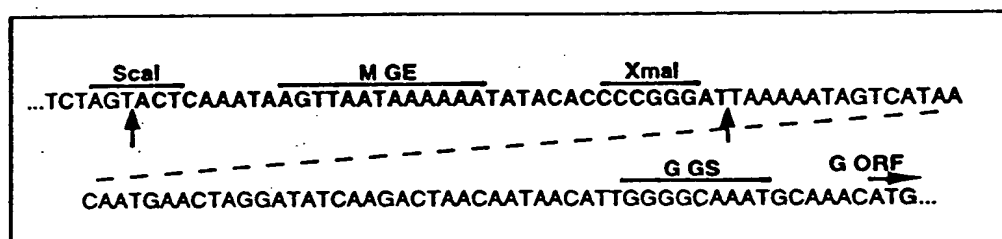


FIG. 6



replace *Scal* - *PacI* fragment of D46 with a short synthetic fragment, thereby deleting the SH gene



transcription of plasmid D46/6368 by T7 RNA polymerase

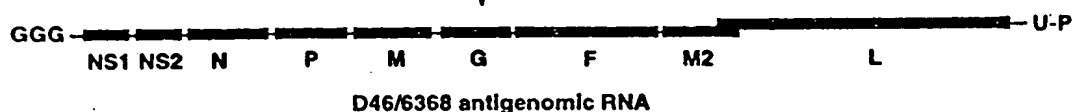


FIG. 7

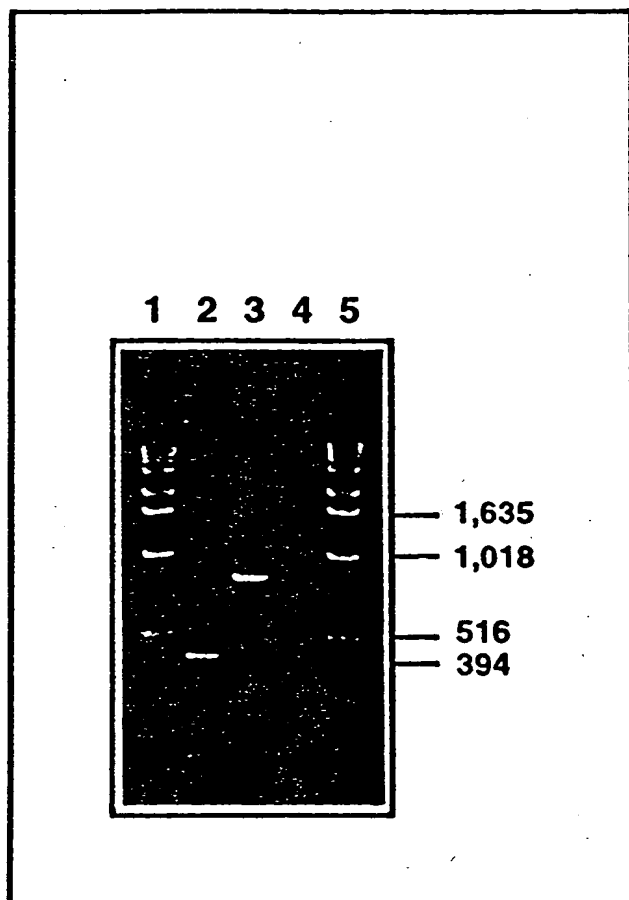


FIG. 8

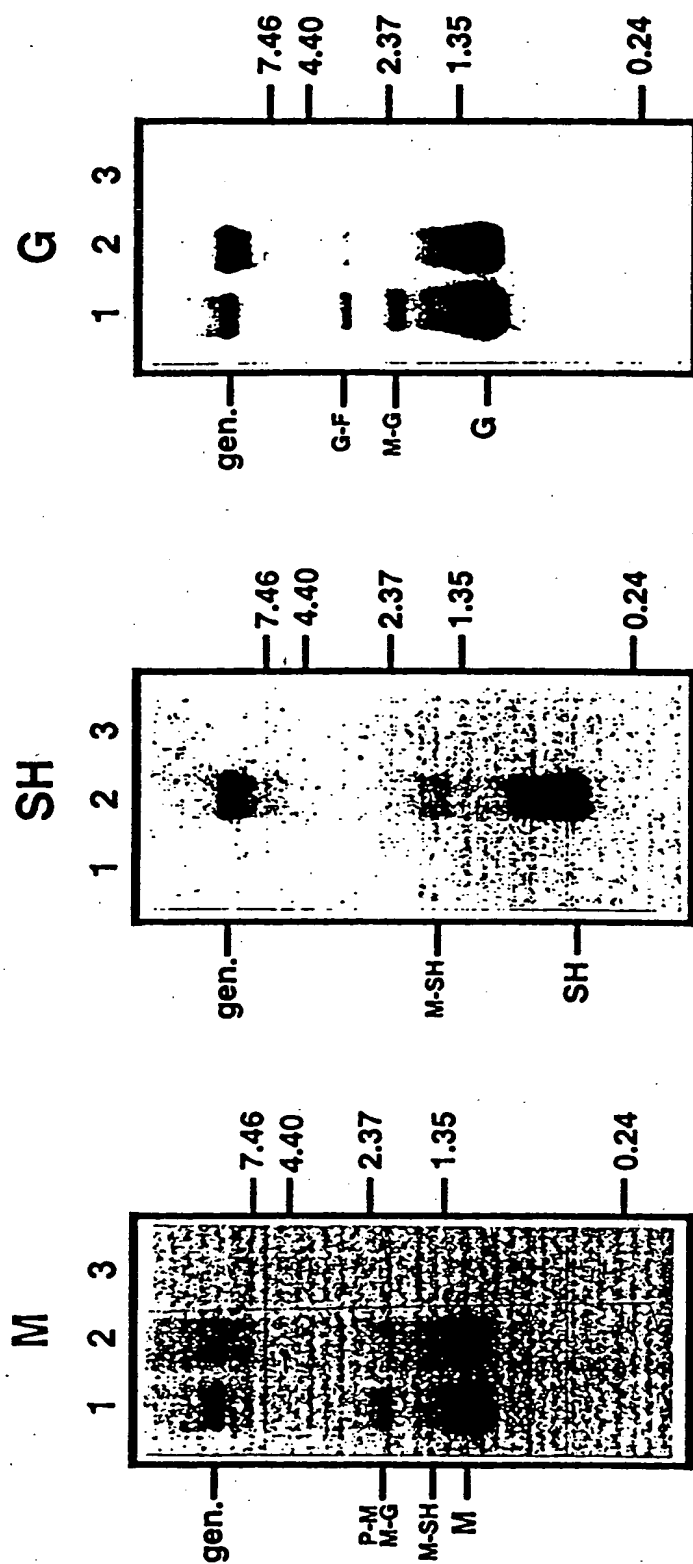
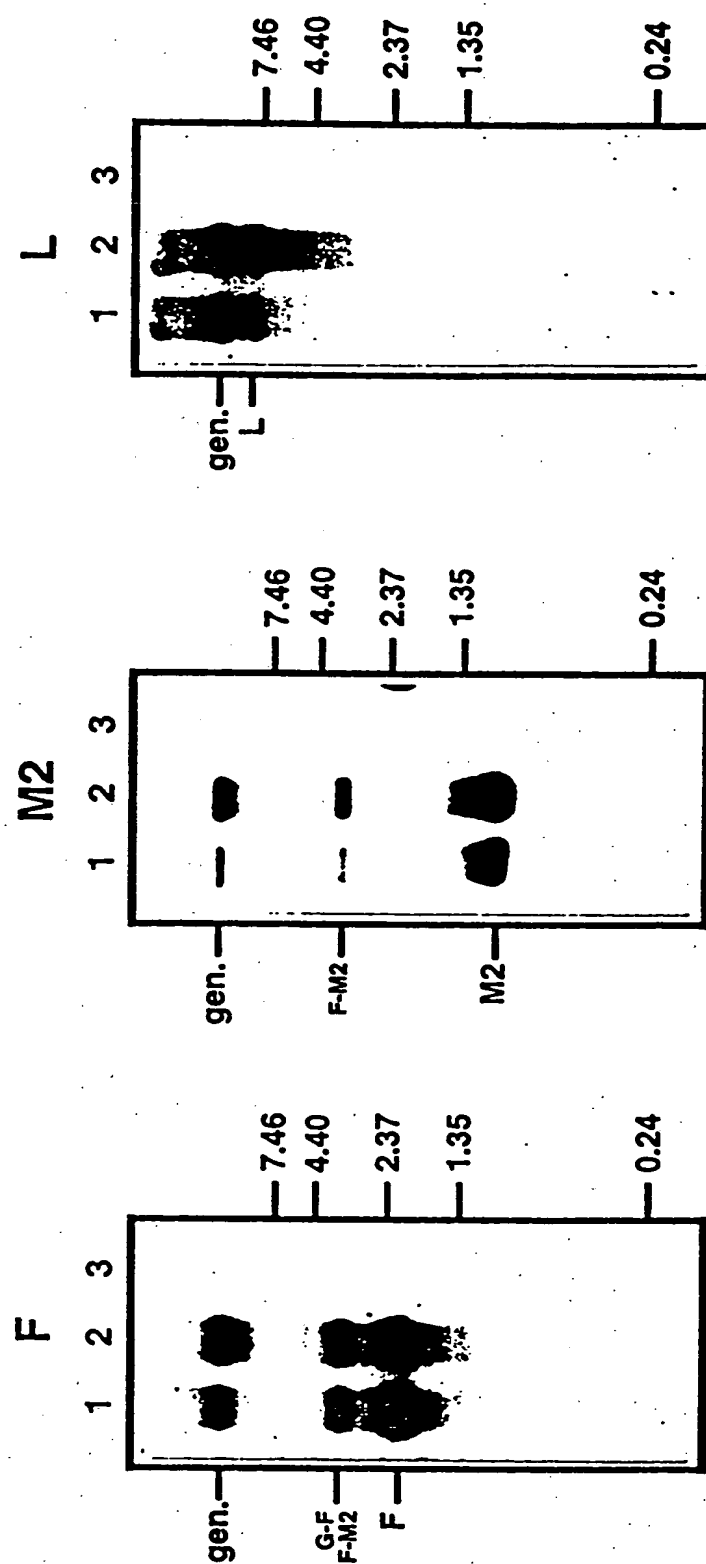


FIG. 9



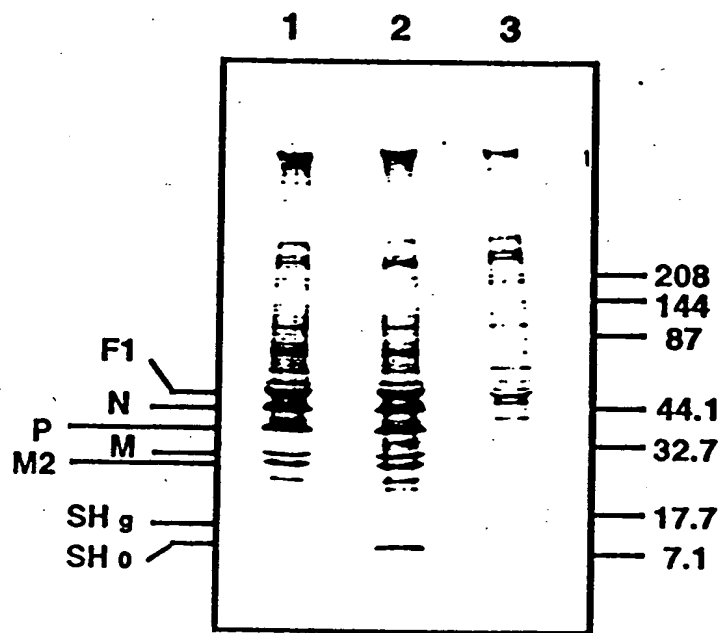


FIG. 10

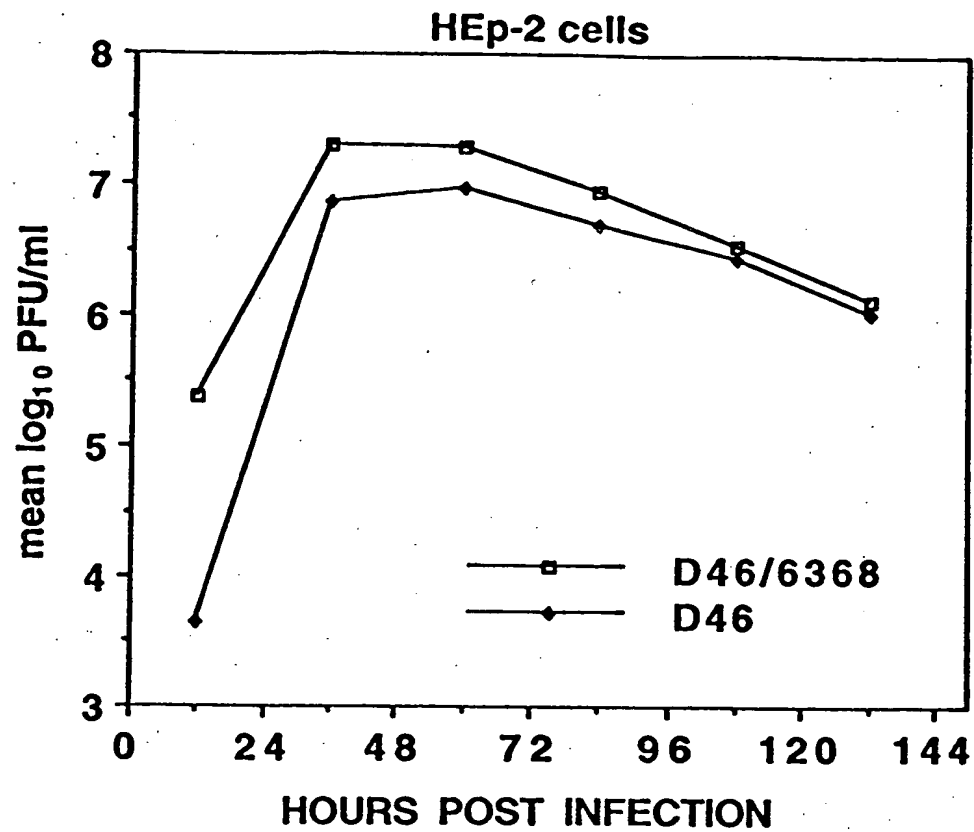


FIG. 11

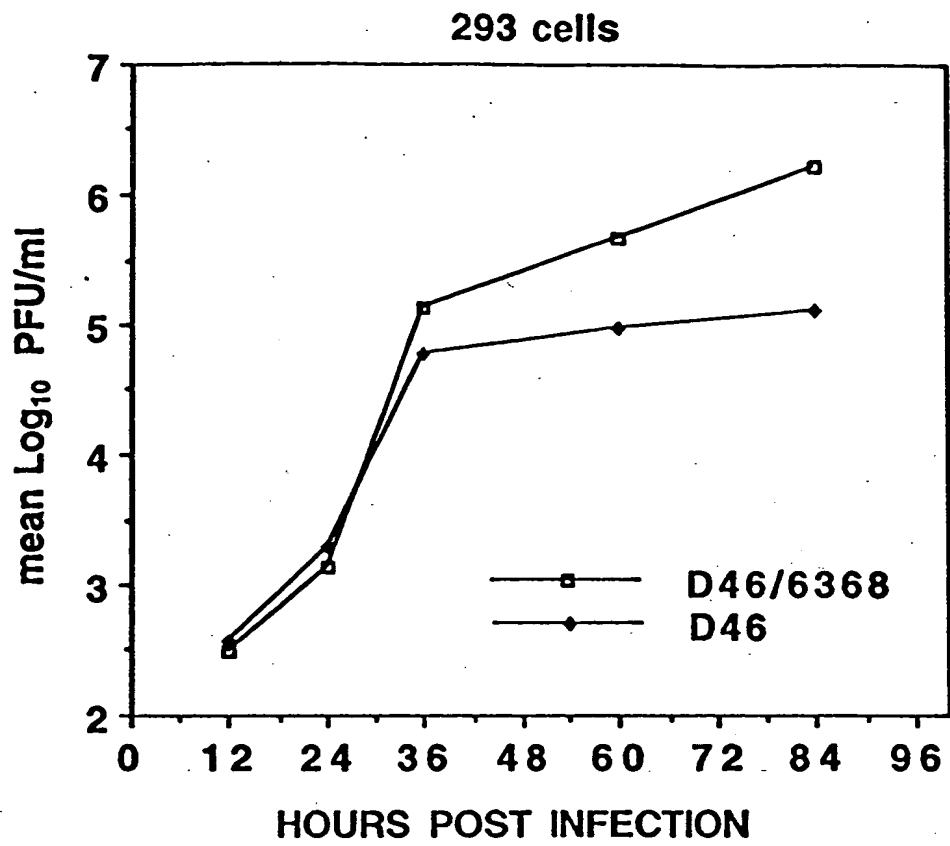


FIG. 12

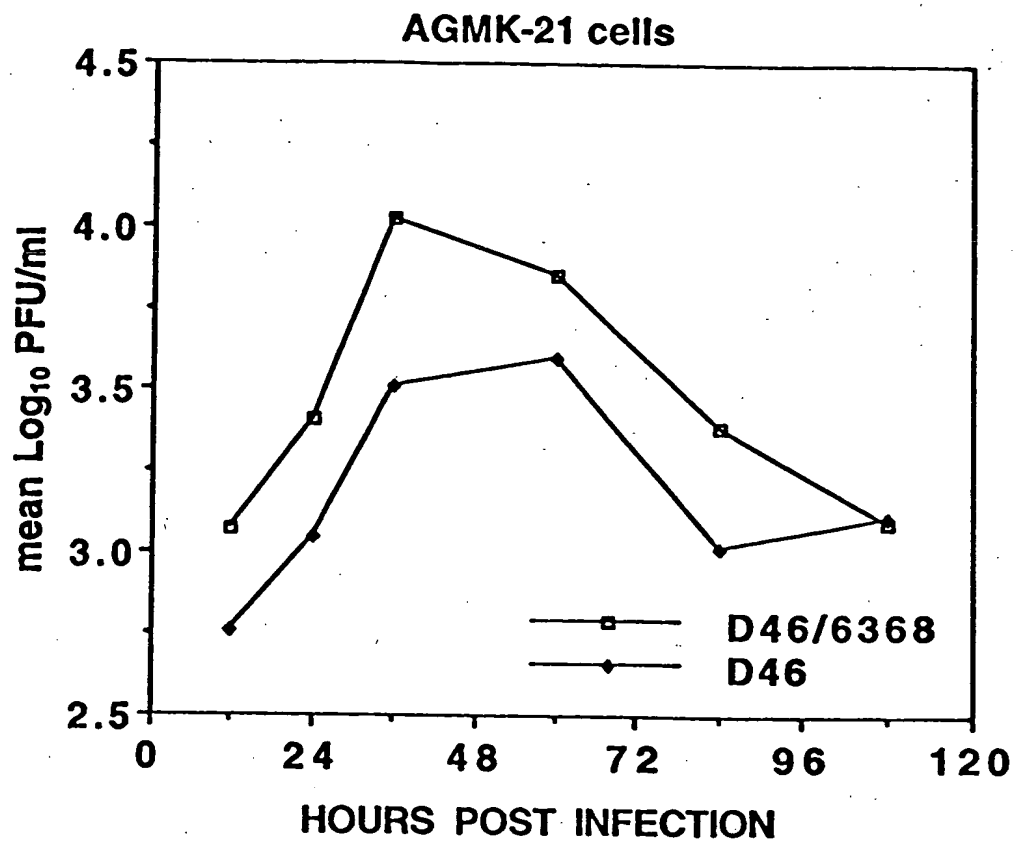


FIG. 13

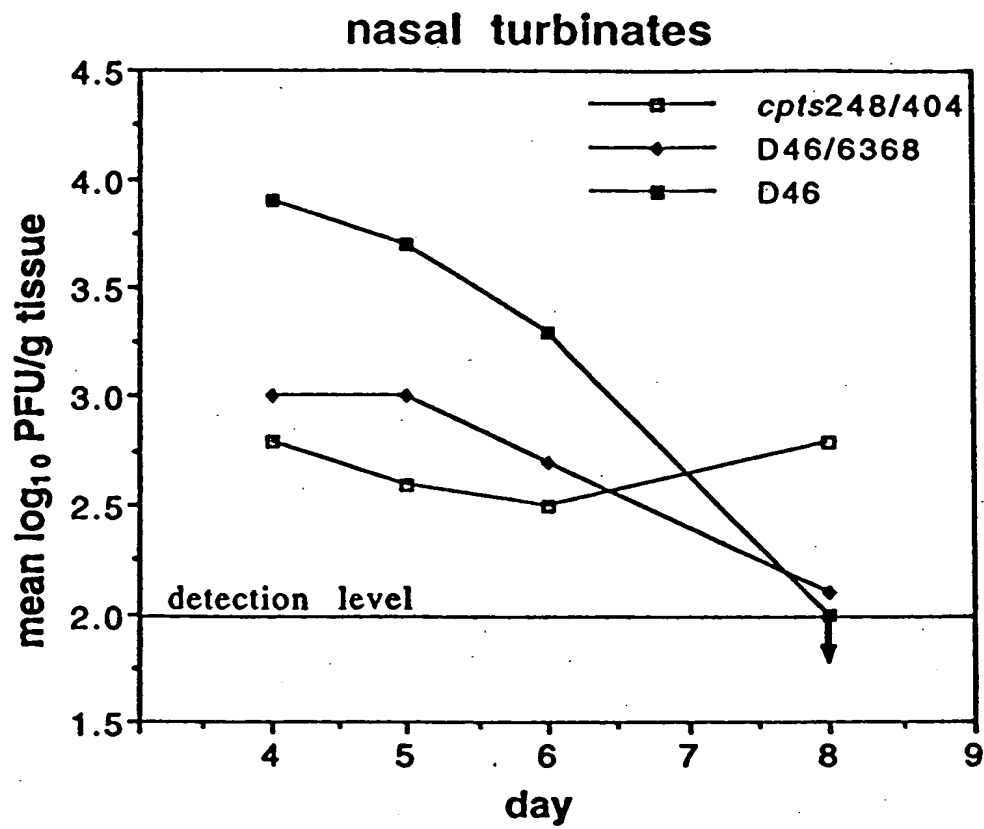


FIG. 14

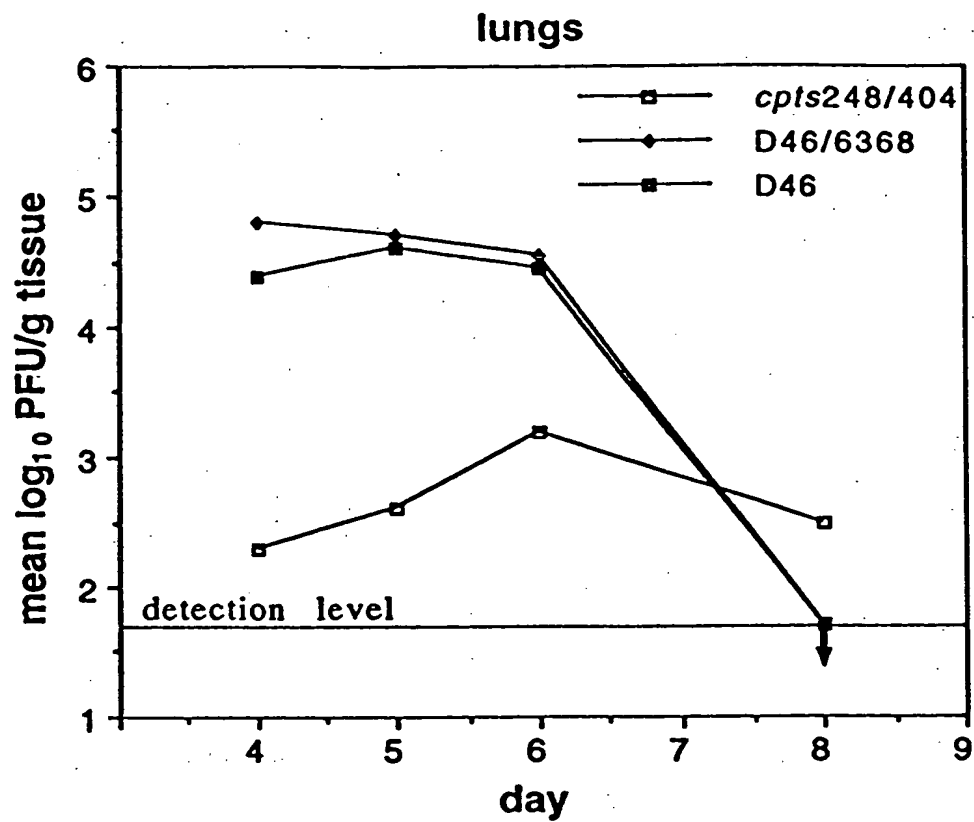


FIG. 15

The SH-minus mutant has a steeper gradient of polar transcription

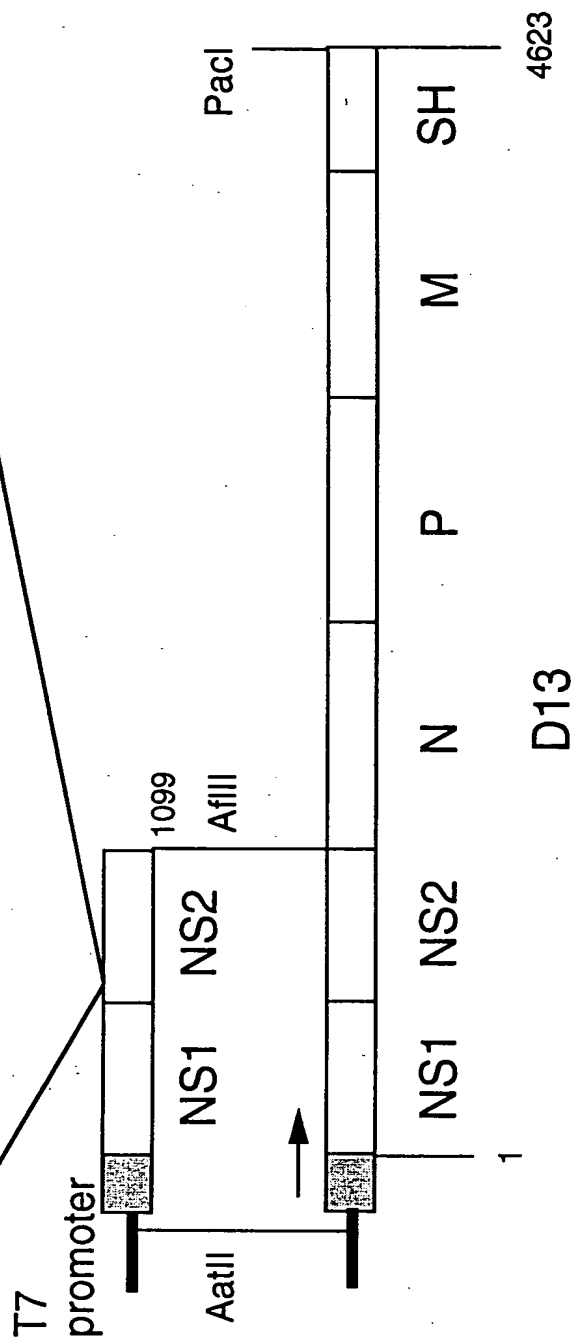
Relative mRNA abundance: SH-minus / wild type				
M	G	F	M2	L
1.1	1.3	0.61	0.32	0.17

Positions of genes in 3'- 5' map				
	5	6	7	10
WT:	3'- M - SH - G - F - M2 - L			
	5	6	9	
SH-minus:	3'- M - - - - G - F - M2 - L			

FIG. 16

ter ter XhoI

	A	A	C	
ATG AGA CCG TTG TCA CTT GAG ACC ATA				
M R P L S L E T I				
18				26



Insertion of two tandem translational stop codons into the NS2 translational open reading frame to ablate expression of the encoded protein

Growth Curve of NS2 Knockout Viruses

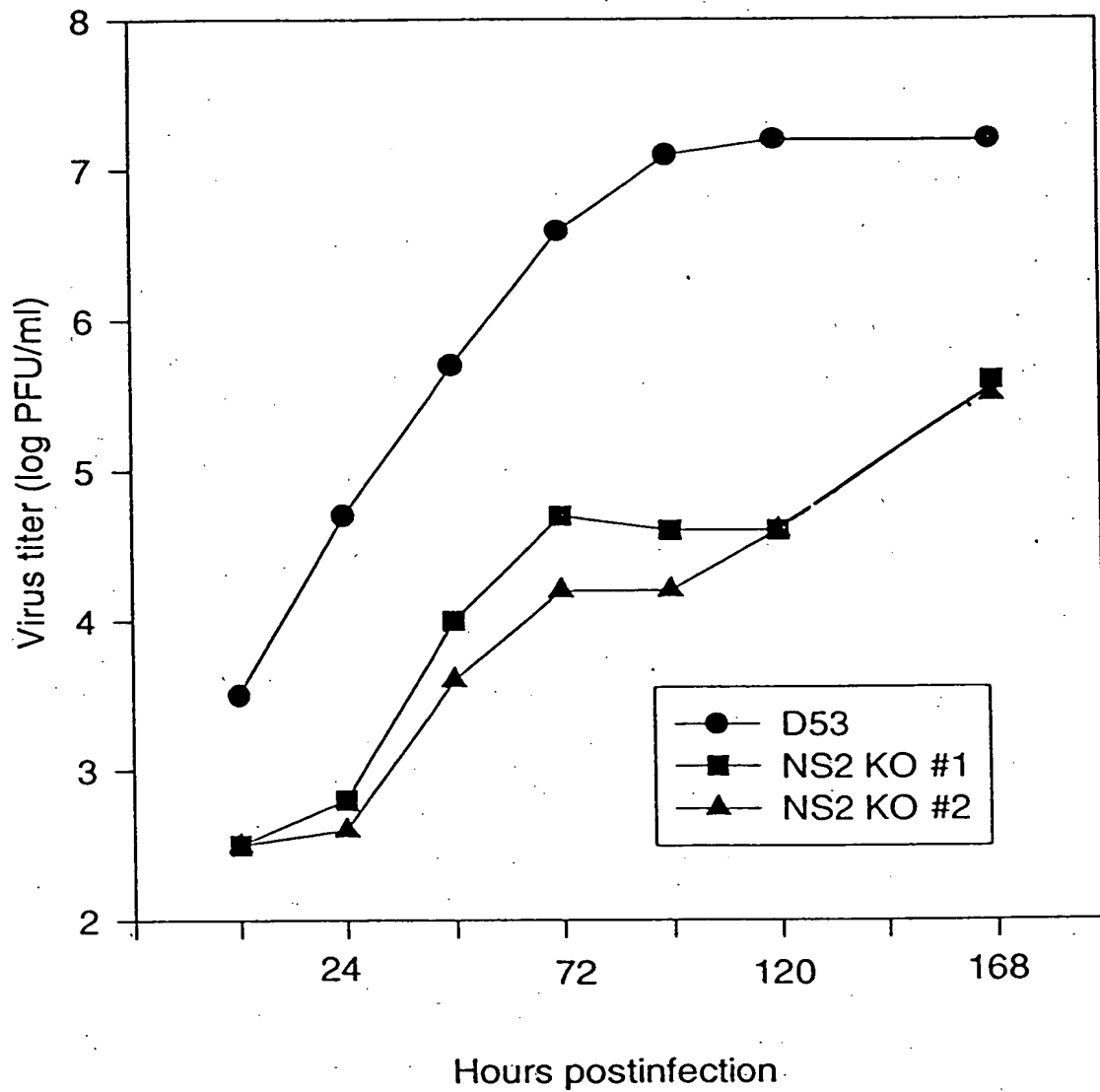


Fig. 19

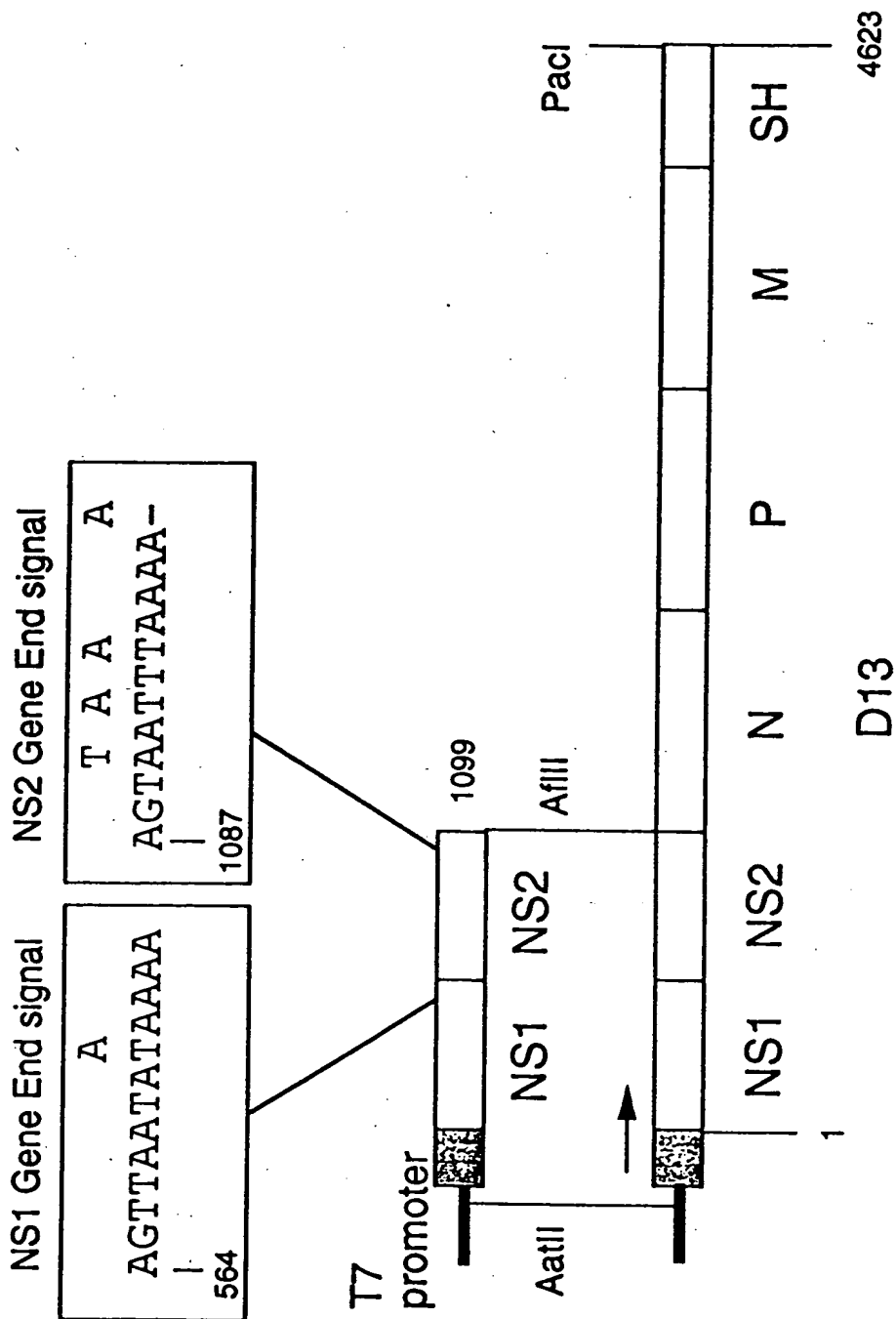
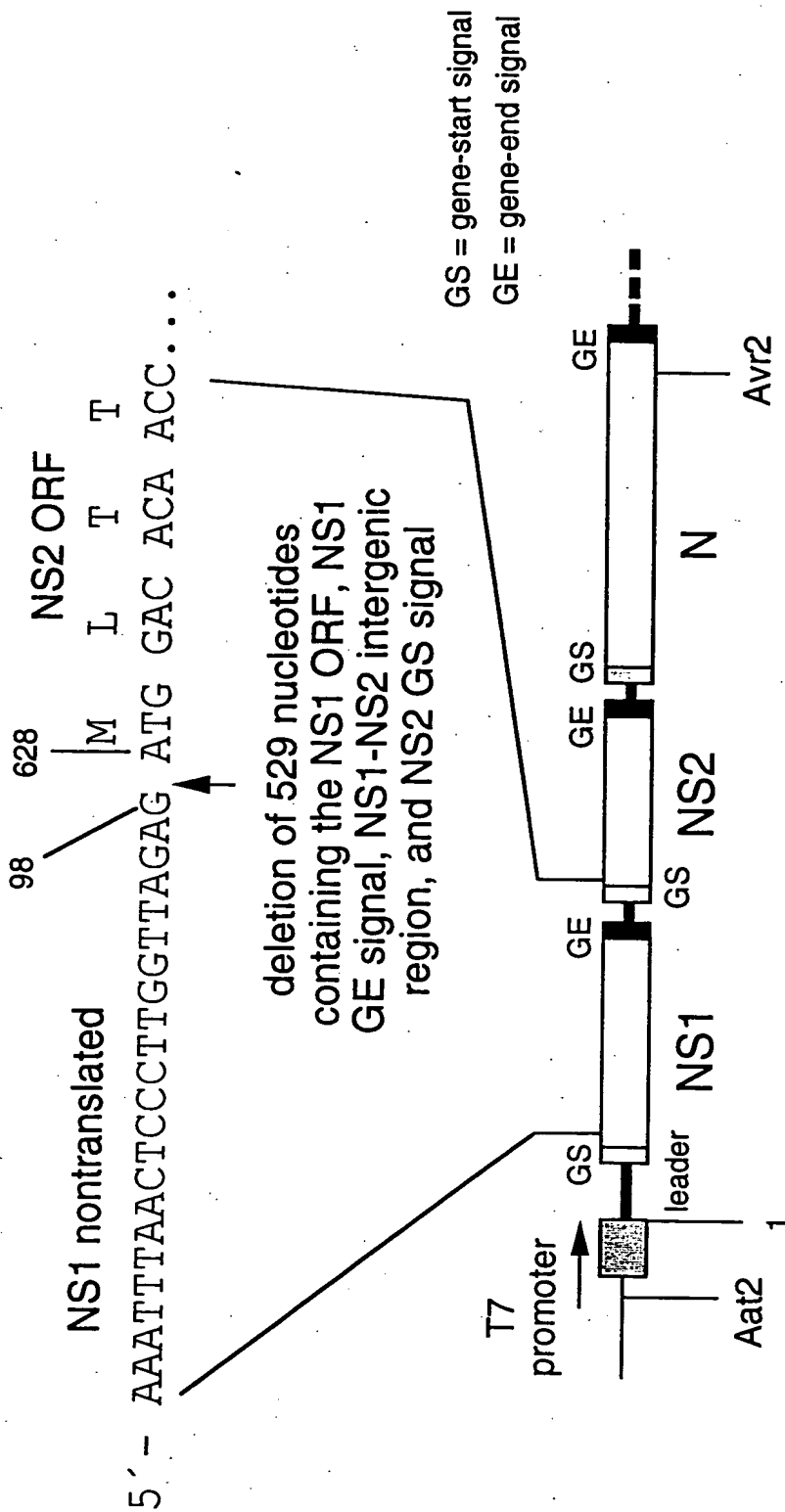


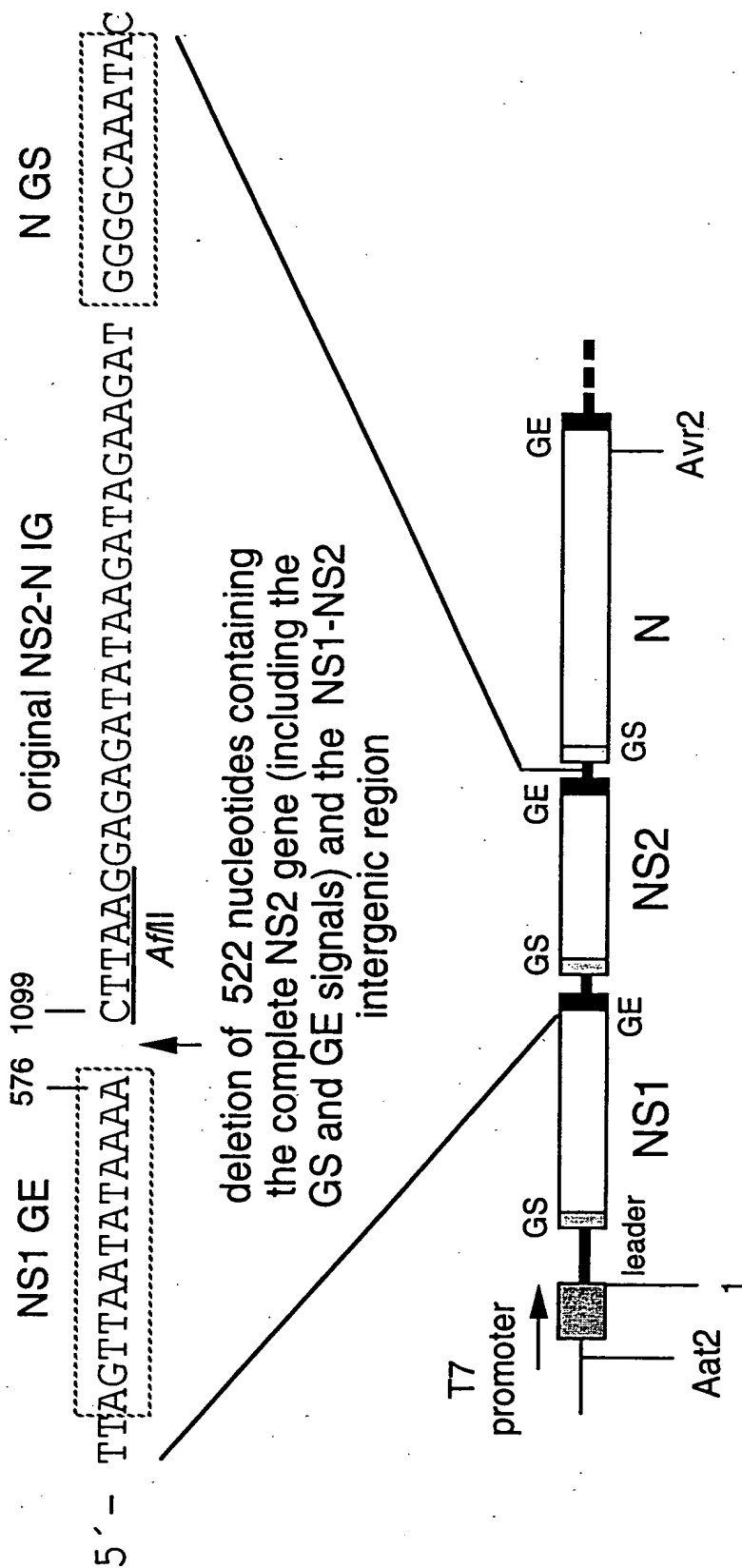
Fig. 20

Modification of the Gene End (GE) signals of the NS1 and NS2 genes.

Fig. 21



Deletion of the NS1 gene. The deletion (arrow) begins immediately upstream of the NS1 ATG and extends to immediately upstream of the NS2 ATG. Note: only the first three genes of the cDNA insert of plasmid D13 are shown. Numbering is from the first nucleotide of the leader region.



Deletion of the NS2 gene. The deletion (arrow) begins after the NS1 gene and extends to immediately after the NS2 gene. Note that only the first three genes of the cDNA insert of plasmid D13 are shown.

Fig. 22

53
S
T
S
I
I
I
I
A
M
48
53
5' - AUU CUG GCA AUG AUA AUC UCA ACU UCA...
U G
I V
VAL-38
ASN-66
AUG-1 AUG-2
(MET-1) (MET-48)
GORF

Ablation of the secreted form of the G protein by mutation of its translational start site. The open rectangle illustrates the G ORF, with the hydrophobic signal-anchor portion filled in. An *MfeI* site created by the mutation is indicated by underlining.

Growth Curve of Membrane G Mutants

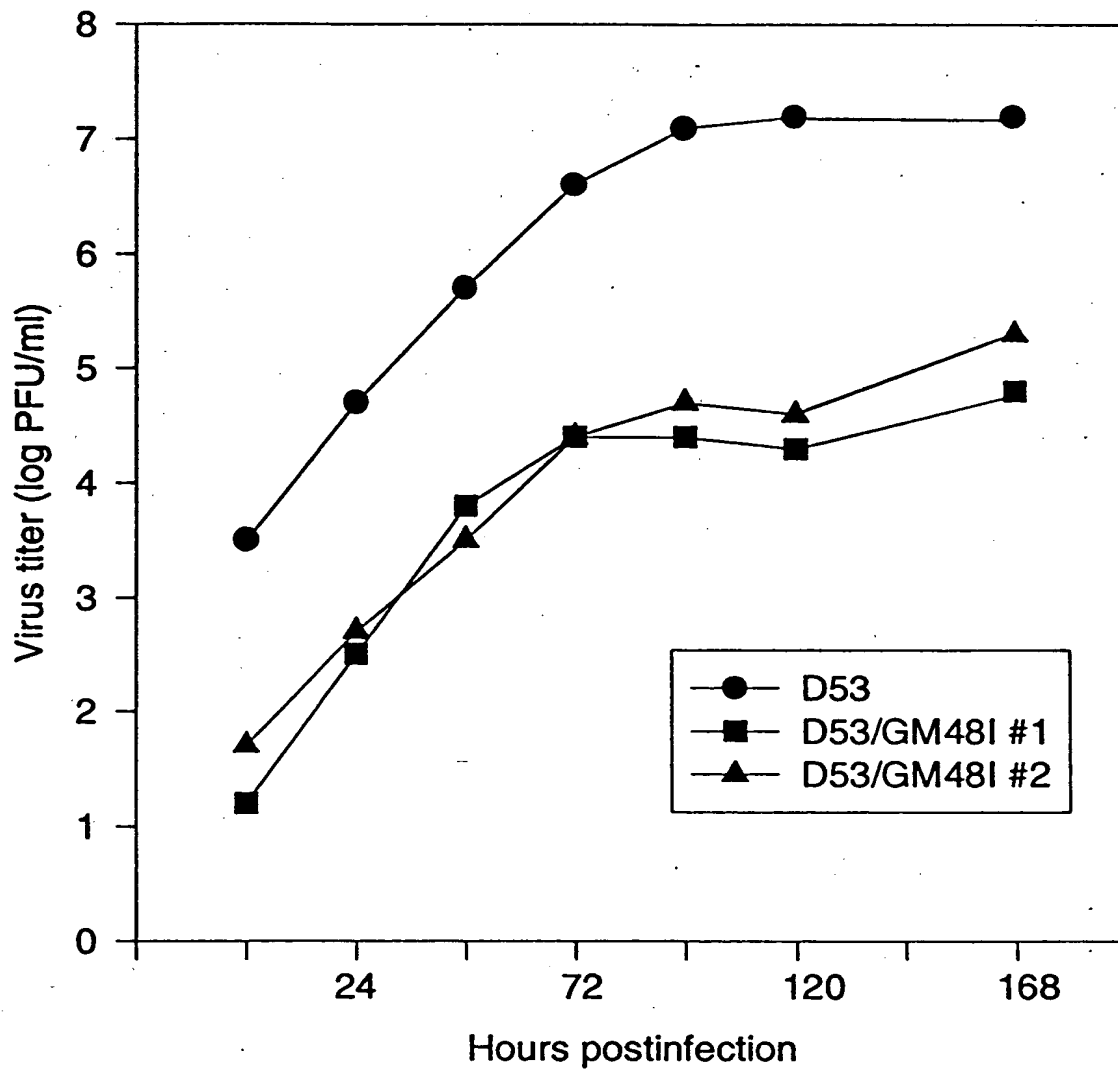


Fig. 24